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| 10/584,796 | 06/28/2006 | Anatoliy Valentinovich Korniyenko | KOR.001 | 3948 |
| 48234 7590 03/02/2010 MEREK, BLACKMON & VOORHEES, LLC 673 S. WASHINGTON ST ALEXANDRIA, VA 22314 | | | | |
| EXAMINER SAVANI, AVINASH A | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/584,796

Applicant(s)KORNIYENKO, ANATOLIY
VALENTINOVICH**Examiner**

AVINASH SAVANI

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/28/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1 and 2 objected to because of the following informalities: Claim 1, line three "differs" is in bold which should be in normal text. "0,002" is an unclear representation of a volume. Claim 2, line 4 "differs" is in bold which should be in normal text. Claim 2, line 9, "(4, !6)" is believed to be a misrepresented element. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation of "mode of its flow at the resonance intensification in this stream of appearing sonic and shock fluctuations differs by the fact that ethylene-glycol is in the amount of 7% of the water mass is added to the water" is unclear because this limitation does not make any sense and will be interpreted that there is a presence of ethylene-glycol in the amount of 7% of the water mass. The limitation of "by means of changing of the tank construction for fluid delivery and changing of the heat generator construction, the method of the simultaneous delivery of operating fluid and its heating is carried out" is unclear because this implies that a specific construction of the tank is needed to get the desired results, however this construction is not given, and therefore the claim will be interpreted as a method for

producing heat by forming swirling water and ethylene-glycol in the amount of 7% of water mass is added to a stream of air.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitations of "which comprises at least three successively connected manifolds with different diameters" is unclear in that it is unclear to what the "which" refers to. Also, "comprises inside static cavitators" is unclear because it is unclear as to what comprises these cavitators. The claim will be interpreted to mean that the heat generator has these in general, and may not be associated with a particular element.

4. Claims 1 and 2 rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eskeli [3961485], further in view of Salyer [6493507].

8. With respect to claim 1, and regarding the 35 USC 112, 2nd rejection above, Eskeli discloses the method for producing heat for heating building and constructions by means of forming swirling water stream and providing a cavitational mode by means of changing of the tank construction for fluid delivery and changing of the heat generator construction, the method of the simultaneous delivery of operating fluid and its heating is carried out [see abstract], however does not disclose the adding of ethylene-glycol as further claimed. Salyer teaches a similar heating method wherein ethylene-glycol in the amount of 7% of the water mass is added to a fluid stream [col 6, line 49-60]. In view of Salyer, ethylene-glycol is present in the amount of 7% of the water mass. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use ethylene-glycol in a heating system because the technique was known to provide for optimum heating capabilities.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hildebrandt [4372254], further in view of Horne et al [4344567].

10. With respect to claim 2, and regarding the 35 USC 112, 2nd rejection above, Hildebrandt discloses the continuous cavitation heat generator with the operating fluid inlet and outlet, with the pump connected to the heat generator inlet, with the fluid motion accelerator, feeding and return pipes, with unidirectional conical manifolds, with the conical fluid splitter differs by the fact that the cavitational heat-generator additionally comprises an operating fluid accelerator-promoter, which comprises at least three successively connected manifolds with different diameters of their running passages and interconnected by means of flanges of the change of the main fluid stream motion direction with a conical slant and ejection accelerating passage [see FIG 1, col 2, line 29-col 3, line 5], however does not disclose inside static cavitators. Horne teaches a similar device wherein there are inside static cavitators with radially disposed holes for generating of a stream of calibrated cavitational bubbles, and cavitational Laval nozzles, an increased pressure fluid chamber and static cavitators, which are disposed in the heat generator central and outlet fittings, which are at least five, distributing flanges of the main fluid stream, which enters simultaneously the heat generator outlet flanges and the feeding pipe manifold [see FIG 3, abstract, col 2, line 27-51]. In view of Horne, there is an element to assist in cavitation. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide inside static cavitators because the technique was known in the art to provide a heat generating means, yielding the predictable result of providing a combustionless heating device

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AVINASH SAVANI whose telephone number is (571)270-3762. The examiner can normally be reached on Monday- Friday, alternate Fridays off, 7:30-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven McAllister can be reached on 571-272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Avinash Savani/
Examiner, Art Unit 3749

/Steven B. McAllister/
Supervisory Patent Examiner, Art Unit 3749

/A. S./
2/22/2010